


Michigan Newborn Screening Program



Specimen Collection

*Michigan Department
of Community Health*



Michigan Newborn Screening History



- 1965
 - Phenylketonuria
- 1977
 - Congenital Hypothyroidism
- 1984
 - Galactosemia
- 1987
 - Biotinidase Deficiency,
 - Maple Syrup Urine Disease
 - Hemoglobinopathies
- 1993
 - Congenital Adrenal Hyperplasia
- 2003
 - Medium-Chain Acyl-Coenzyme A Dehydrogenase Deficiency (MCAD)

Screening Recommendations



- Obtain initial screen at 24-36 hours of age
- Always test before discharge or transfer regardless of age
 - Repeat test needed within one week if < 24 hours old
- Always test before transfusion of red blood cells

Completing the Card



- Accurate information is vital
 - Identification /location of infants for follow up of abnormal results
 - Inaccurate information could cause a life-threatening delay for affected infants
 - Age (in hours) and weight are critical to provide accurate screening results

Completing the Card



- Remove hearing slip before blood collection
- All information should be accurate, legible and complete

The sample submitter is legally responsible for the accuracy and completeness of the information on the newborn screening card

Completing the Card

Critical Demographic Information



Press Firmly with Pen

Baby's last name

Mother's first and last name

Mother's social security #

Birthweight in grams

Date of birth

Date of specimen collection

Hours of age (when specimen collected)

Date of transfusion (red blood cells)

New Screening Cards 2003



Features of the revised card

- Submitter copy
- Date/time of birth and date/time of specimen collection
- Space for initials of person collecting specimen
- Overlay flap to protect filter paper before collection
- Target date for implementation June 1, 2003

Revised Newborn Screening Card


Newborn Screening - Michigan Department of Community Health
Bureau of Laboratories P.O. Box 30689 3350 N. MLK Jr. Blvd. Lansing MI 48909

DCH-1153 L-XXXXXXX Print Firmly with Pen

BABY										MOTHER										PHYSICIAN										SUBMITTER																													
LAST NAME										FIRST NAME										LAST NAME										FIRST NAME										LAST NAME										FIRST NAME									
BIRTH DATE										BIRTH TIME (Military)										BIRTH WT. (grs)										WKS GESTATION										GENDER										BIRTH ORDER									
SPECIMEN DATE										COLLECTION TIME (Military)										NICU/ SPECIAL CARE?										RBC TRANSFUSION?										DATE																			
MEDICAL RECORD #										TPN FEEDING?										HISPANIC										WHITE										AMERICAN INDIAN										MIDDLE EASTERN									
										NO YES										NON-HISPANIC										BLACK										ASIAN/PACIFIC ISLAND.										MULTI-RACIAL									
LAST NAME										FIRST NAME										LAST NAME										FIRST NAME										LAST NAME										FIRST NAME									
ADDRESS										ADDRESS										ADDRESS										ADDRESS										ADDRESS										ADDRESS									
CITY										CITY										CITY										CITY										CITY										CITY									
STATE										STATE										STATE										STATE										STATE										STATE									
ZIP										ZIP										ZIP										ZIP										ZIP										ZIP									
SOCIAL SECURITY NUMBER										SOCIAL SECURITY NUMBER										SOCIAL SECURITY NUMBER										SOCIAL SECURITY NUMBER										SOCIAL SECURITY NUMBER																			
MEDICAL RECORD #										BIRTH DATE										HEPATITIS B SURFACE ANTIGEN (HBsAg)										TEST DATE										RESULT																			
										M M D D Y Y																				M M D D Y Y										POSITIVE																			
																																								NEGATIVE																			
LAST NAME										FIRST NAME										LAST NAME										FIRST NAME										LAST NAME										FIRST NAME									
PHONE										PHONE										PHONE										PHONE										PHONE										PHONE									
SUBMITTER NAME										SUBMITTER NAME										SUBMITTER NAME										SUBMITTER NAME										SUBMITTER NAME										SUBMITTER NAME									
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ZIP										ZIP										ZIP										ZIP										ZIP										ZIP									
BIRTH HOSPITAL										BIRTH HOSPITAL										BIRTH HOSPITAL										BIRTH HOSPITAL										BIRTH HOSPITAL										BIRTH HOSPITAL									
(if different from submitter)										(if different from submitter)										(if different from submitter)										(if different from submitter)										(if different from submitter)										(if different from submitter)									

MDCH use only

1234567



MDCH USE ONLY

MI Dept. of Comm. Hlth.
 Card Expires 01/05
 By Authority of Act 368
 MCLA 333.5431

FIRST SAMPLE

MDCH use only

MDCH USE ONLY

Collection Procedure



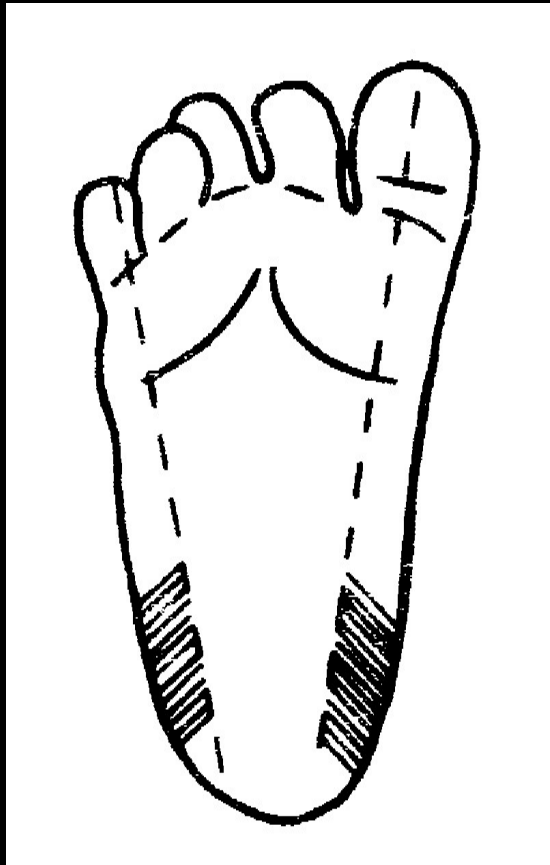
- The MDCH follows the recommendations of the National Committee for Clinical Laboratory Standards (NCCLS) for collecting an acceptable specimen
 - "Blood Collection on Filter Paper for Neonatal Screening Programs; Approved Standard- Third Edition" (October 1997)

Collection Procedure



- Use capillary blood from heelstick
- Fill in all five circles
- Apply blood to **only one side** of the filter paper
- Dry Flat at least 3 hours
- Mail to state laboratory within 24 hours of collection

Collection Procedure



- Warm foot for 3 - 5 minutes to increase blood flow
- Cleanse site with alcohol prep
- Air dry or wipe dry with sterile gauze pad
- See picture for recommended puncture site

Collection Procedure



- Puncture heel with lancet of no more than 2.0 mm in depth
- Wipe away first drop of blood
- Apply gentle pressure to allow a large drop of blood to form
- Lightly touch filter paper to large drop of blood
- Allow blood to soak through to completely fill the circle

Things to Avoid

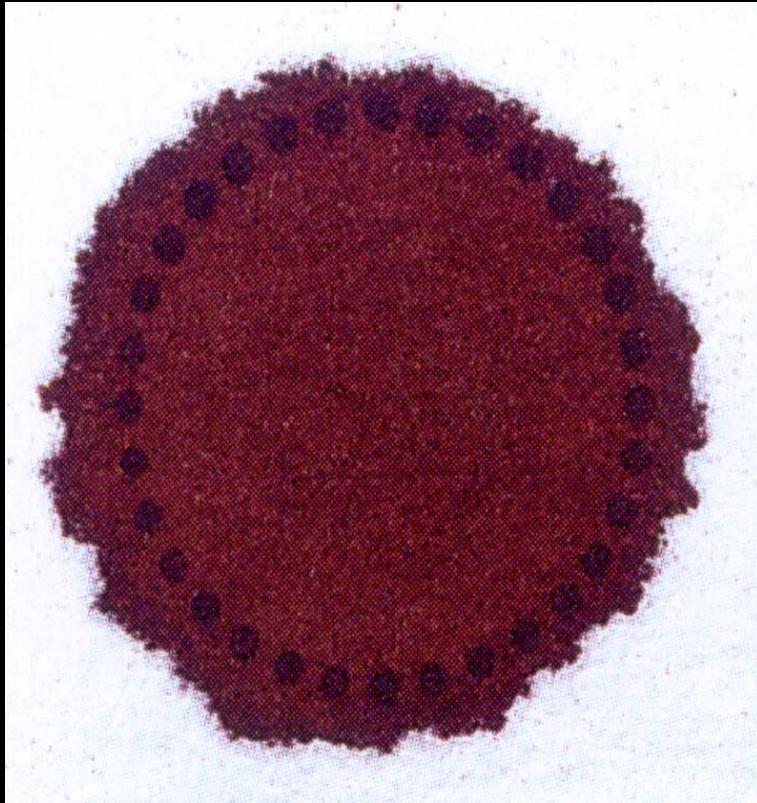


DO NOT

- Apply blood to both sides of the filter paper
- Apply "layers" of blood onto the same circle
- Apply excessive amounts of blood (circles should not touch one another)
- Allow filter paper to come in contact with other substances



Valid Specimen



Allow sufficient
amount of blood
to soak through
to completely fill
the circle



Unsatisfactory Specimens



Insufficient

- All circles not filled with blood
- Entire circle not filled with blood
- Blood did not soak through the filter paper



Scratched or Abraded

- Capillary tube used
- Filter paper mutilated

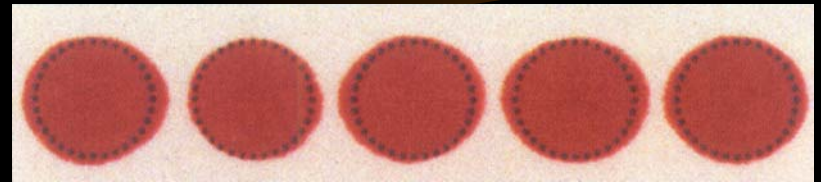


Unsatisfactory Specimens



Supersaturated

- Application of excess blood, usually with a device (syringe)
- Blood should not touch between circles



Not Dry before mailing

- Placed in sealed plastic bag before dry



Unsatisfactory Specimens



Clotted or Layered

- Layers of blood on same circle of card
- Capillary tube used for collection
- Blood applied to both sides of filter paper

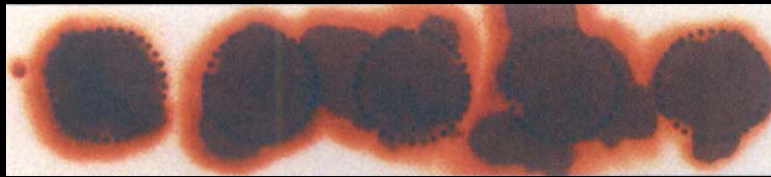


Diluted or Contaminated

- Foot not dried completely from alcohol
- Something spilled on filter paper before or after blood collection

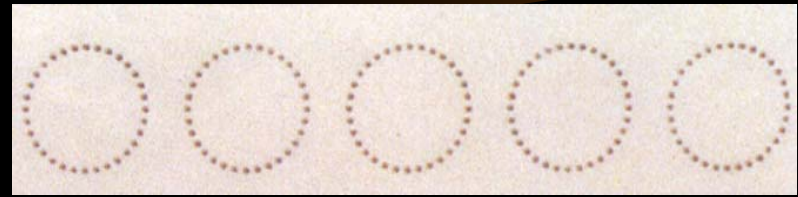


Unsatisfactory Specimens



Serum Rings

- Serum separated into clear rings around blood spot
- Card dried vertically (on side) instead of flat
- Squeezing excessively around puncture site

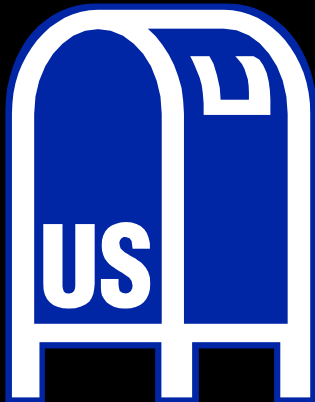


No Blood

Drying/Mailing Instructions



- Air dry specimen FLAT for at least 3 hours
 - Keep away from heat and direct sunlight



- Mail specimens within 24 hours of collection
 - Do not hold specimens for bulk mailing
 - Pre-addressed envelopes are available for prompt mailing

Replacement Blue Cards



OOPS!

If blue cards (initial test) are "damaged" by:

- Improper specimen collection
- Mishandling
- Errors in recording patient or hospital information

Replacement cards can be obtained at no charge.

Replacement Procedure



- Remove the filter paper portion if it contains blood (very important)
- Complete "Newborn Screening Card Replacement Form"
 - Forms available from NBS Accountant, Valerie Klasko at (517) 241-5583

Replacement Procedure



- Indicate clearly on card reason for return
- Mail with submitter's return address to;
Michigan Department of Community Health
Attention: Newborn Screening
Lewis Cass Building 4th Floor
320 South Walnut
Lansing, MI 48913

It's Not Just PKU!



The current newborn screening panel tests for 7 disorders (8 as of April 2003). To avoid confusion, it is important to use correct terminology when referring to newborn screening tests.

Please make every effort to call the test "Newborn Screen" rather than "PKU"

Contact Information



Newborn Screening Program

Telephone: (517) 335-9205

Fax: (517) 335-9419

Email: mdch-newbornscreening@michigan.gov

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